

2022-2024 New Medium Term Business Plan

May 20, 2022

Mitsui Mining & Smelting Co., Ltd.



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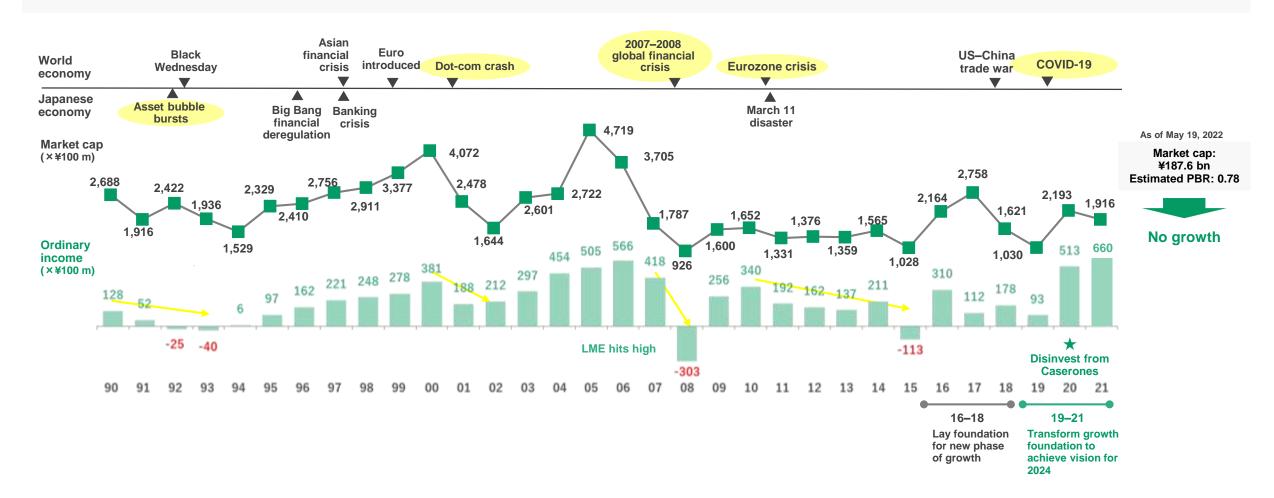
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1 Introduction



Performance over the years has been volatile, preventing growth.

Caserones Copper Mine posed biggest risk; pulling out allowed us to allocate capital more effectively.



Working toward the vision for 2024, we made progress in getting each business segment to cultivate markets independently. However, this did not translate into growth.

To cope with the changing business climate, we need a new group-wide approach and better organizational agility.

16-18 and 19-21 plans in context

2019–2021 general review

Vision for 2024 By 2024, we want to be a company that continually creates and develops growth products and businesses in our three core business segments (Engineered Materials, Metals, and Automotive Parts) 2016-2018 2019-2021 2022-2024 Lay foundation for new phase Transform growth foundation to Forge a future beyond our achieve vision for 2024 150th anniversary of growth **Global shifts** The broader climate has changed profoundly (SDG agenda, climate action, Covid)

Despite expecting record profit in FY2021, we failed to grow because of volatility.

Improving existing businesses: We made some progress in having business segments cultivate markets independently, but the growth picture remained obscure. Discussions over allocating capital were insufficient.

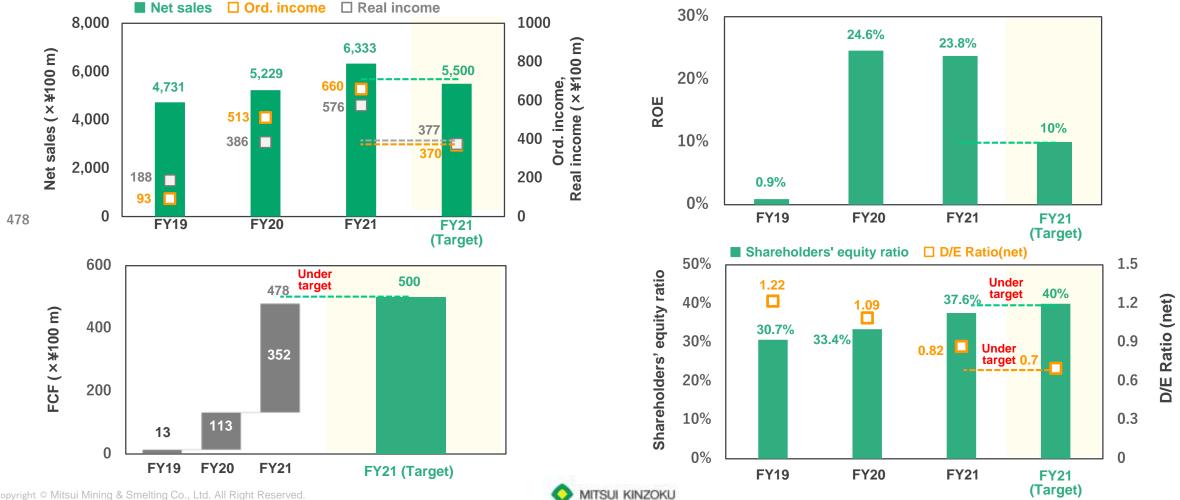
Forging new businesses: We launched the Business Creation Sector. However, insufficient capital was allocated.

Caserones: We offloaded risk in our mine stake.

- The strategy of having business segments cultivate markets independently is insufficient to achieve growth; we need a new group-wide approach.
- We can no longer rely on the old formula to cope with the profound global changes; we must build organizational agility.

In FY21 (3/22), we achieved our three-year targets for net sales (¥633.3 bn), ordinary income (¥66.0 bn), and real income (¥57.6 bn).

However, we missed the targets for free cash flow (FCF), shareholders' equity ratio, and D/E ratio.



2 Purpose, Vision



Our Purpose

We promote the well-being of the world through a spirit of exploration and diverse technologies.



Goal: Promote the well-being of the world

Means: Spirit of exploration, diverse technologies

We promote the well-being of the world through a spirit of exploration and diverse technologies.



The actions we take to achieve our goal

- Shift to a portfolio that supports a low-carbon and prosperous future
- Reduce carbon footprint of business activities
- · Link new businesses with goal

The changes we make to achieve our goal

- · Recruit and develop a workforce that identifies with our goal
- · Employees to develop ideas for achieving our goal



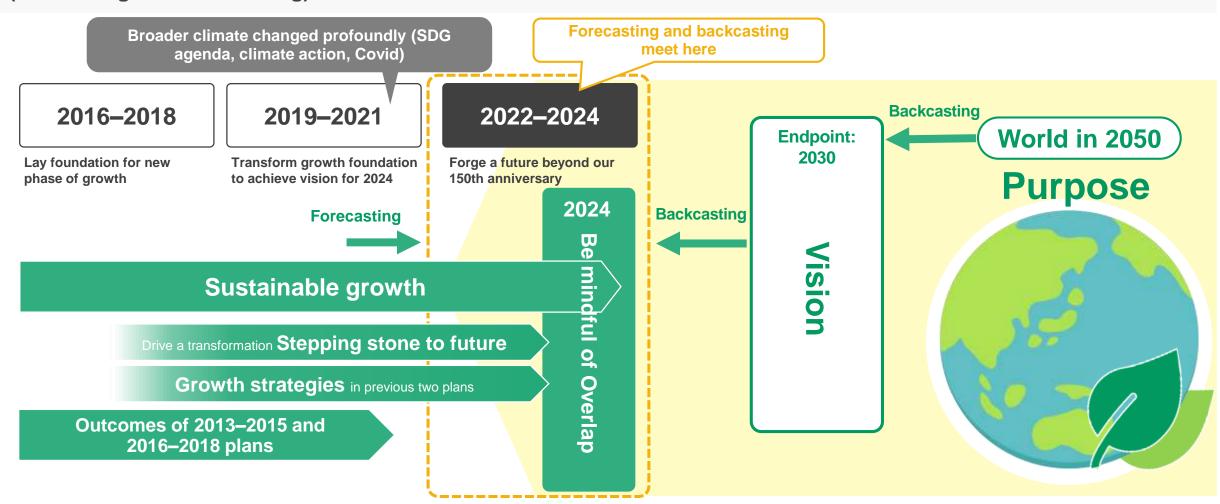
Our Vision

Building new businesses -and the futurewith our material intelligence.

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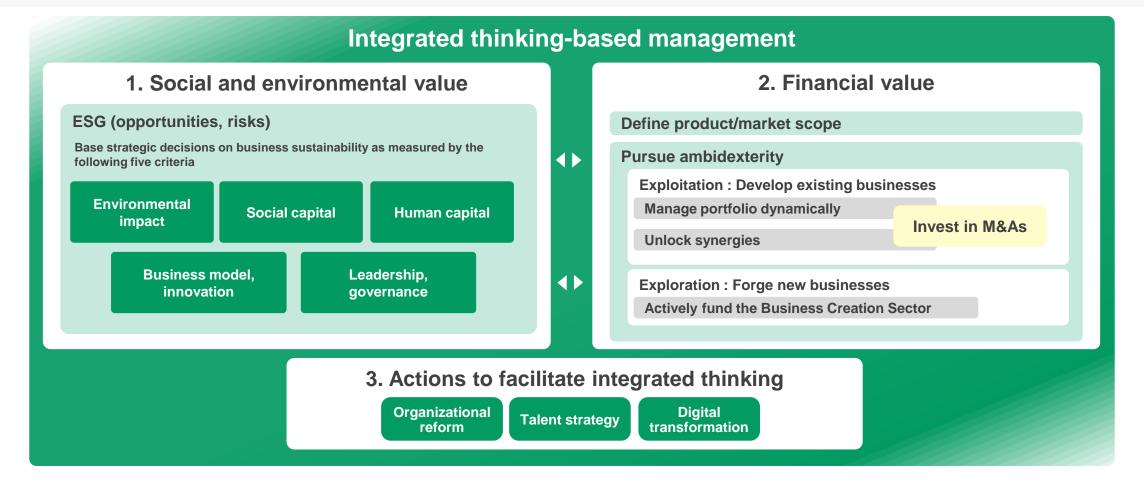
The endpoint for the Purpose is 2050. From that point, we backcasted a vision for 2030.

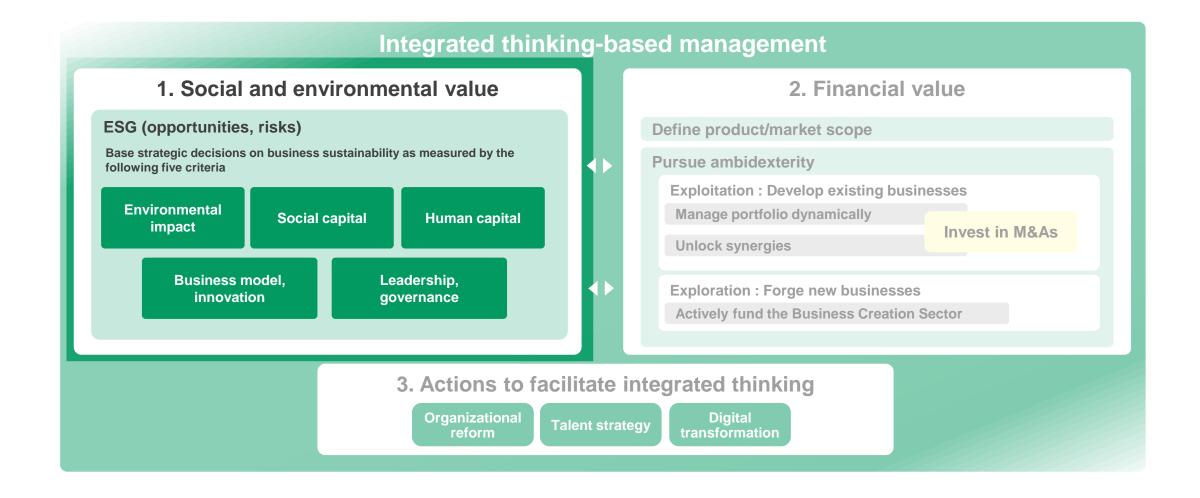
The 2022–2024 plan, rather than being an extension of the previous plan, marks a phase where two vectors (forecasting and backcasting) meet.





We will integrate thinking-based management across the group so that social/environmental and financial goals reinforce one another and connect to the Purpose and Vision.





Base strategic decisions on business sustainability as measured by the following five criteria







Business model, innovation



Environmental impact

Social capital

Human capital

Business model, innovation

Leadership, governance

Current situation



- Amid rising pressure to address climate change, Japan declared it would become carbon neutral by 2050.
- ◆ Globally, companies are increasingly endorsing the TCFD recommendations⁽¹⁾ for disclosing climate-related risks and opportunities.
- ◆ The revised Corporate Governance Code requires more specific climate commitments (such as TCFD reporting).

Future actions



Reduce GHG emissions

Apply TCFD recommendations and LCA⁽²⁾



 Create greener goods/ services and business models



- Reach carbon neutrality by 2050
- Commit to 2030 GHG reduction goals

Manage water risks



- Measure water stress
- Rectify water withdrawal
- Minimize water consumption

Manage waste and hazmat risks



Contribute to circular economy

- Minimize discharges into environment
- Use recycled materials
- Reduce waste output
- *1 TCFD: Task Force on Climate-Related Financial Disclosures
- *2 LCA: Life cycle assessment



Environmental impact

Social capital

Human capital

Business model, innovation

Ē

Leadership, governance

Current situation

Rise in human rights due diligence

- Respect for human rights is enshrined in global declarations and guidelines (UDHR, UNGPs).
- In line with this trend, the Japanese Govt. has set an action plan on business and human rights.

🚝 Human capita

<u>...</u>

Social capital

Cultivating next generation of leaders

- Workplace diversity has become increasingly important: Interest in social and economic issues, inclusivity, emphasis on work-life balance
- Companies must make way for next generation of leaders who have received education for sustainable development.

Future actions



- Opportunities A Risks

Δ

Human rights

Respect for human rights

- Undertake human rights due diligence
- · Identify risks and address them effectively

Engagement with communities

Engage better with communities

 Encourage employees to engage in co-creation with local communities

Occupational health and

safety



Foster workplace wellbeing

- Eliminate serious incidents
- · Ensure health and safety in workplace
- Commit to employee wellbeing targets

Foster job satisfaction

Practice diversity and inclusion

Œ Make human capital

(build diverse workplace)

more competitive

Transform job satisfaction

- Shift to performancebased system
- Provide career support



Environmental impact

Social capital

Human capital

Business model, innovation

Leadership, governance

Current situation



Business model, innovation

Rise in supply chain due diligence

- With ISO 26000 and industry-specific guidelines, companies are increasingly expected to promote social responsibility in their supply chains.
- ◆ In line with this trend, the Japanese Govt. has set an action plan on business and human rights.



Leadership, governance

Rise in ESG reporting

With the rise in ESG investing, companies are increasingly expected to report their ESG performance.

Future actions



Product design, life cycle management



Reduce carbon footprint across supply chains

Introduce LCA in each business unit



resilience



- Every year, produce new products that address social or environmental issues
- Use scenario analyses repeatedly

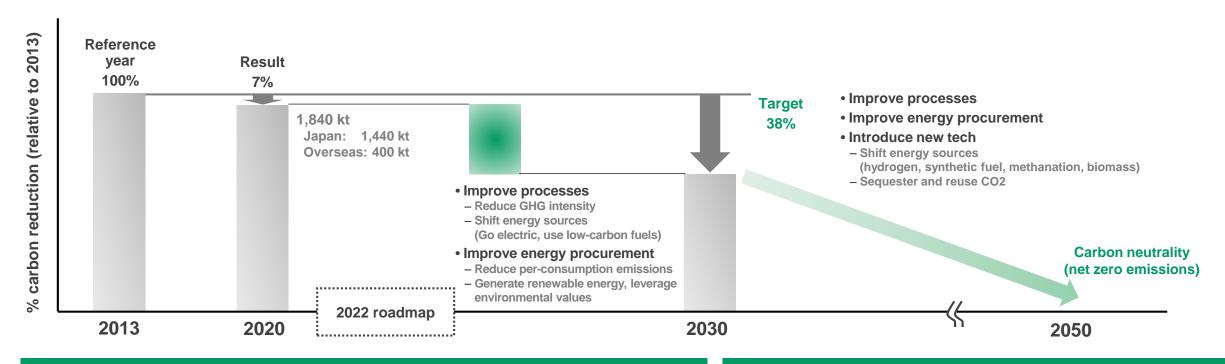
Managing risk of major incident



- Ensure sustained commitment to compliance
- Manage ESG risks in an integrated way



To become carbon neutral by 2050, we must reduce carbon emissions by 38% by 2030.



Create projects for reducing carbon emissions

Use LCA to identify areas to improve

- ♦ Roll out LCA across organization (during 2022–2024 period)
- Quantify carbon footprint of each product and process

Use TCFD scenario analysis to formulate strategy

- ◆ Roll out TCFD scenario analysis across organization (during 2022–2024 period)
- **♦** Establish technologies and strategies for reducing carbon emissions

Implement projects

Use internal carbon pricing (ICP) as a guide for environmental investment

◆ Use ICP to assess profitability of prospective investments in carbon reduction and invest accordingly (trial the method in FY2022 and fully launch it in FY2023).

We must embrace diversity to make our human capital more competitive. By providing career support and transforming job satisfaction, we will unlock the potential of employees and the organization as a whole.

Innovative workplace

Engaged workplace

Increase workplace diversity

Promote workplace diversity

◆ Empower women in the workplace as step for promoting other all types of diversity

Strategy: Provide flexible work practices and support systems, and foster inclusive workplace culture

KPIs (2024)

- Women account for >20% of new hires
- Women occupy >5% of management posts
- >50% takeup rate for partner's leave

Make the workplace more inclusive

Career support

◆ Respect diversity in career aspirations and help every employee achieve professional growth

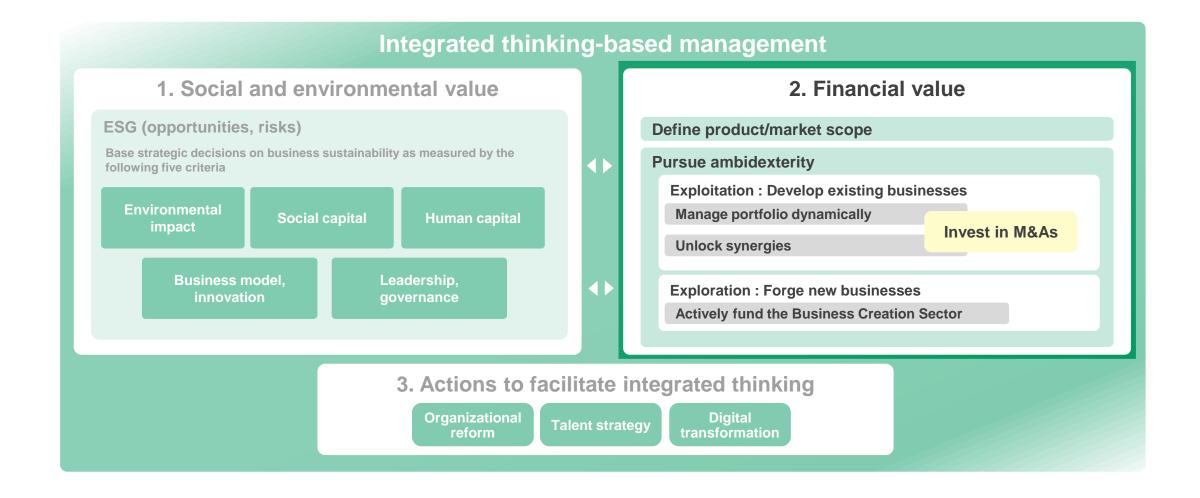
Strategy: Provide bespoke, one-on-one careers advice

Job satisfaction

- ◆ Provide a positive work environment (one that supports focus and productivity)
- ◆ Use employee surveys to identify areas to improve; develop and showcase best practices and success stories

Performance-based talent management





We have redefined the scope of our products and markets with a view to achieving the Vision and Purpose. Accordingly, we will adjust and renew our portfolio in the run-up to 2030.

Achieve Vision and Purpose

Purpose

We promote the well-being of the world through a spirit of exploration and diverse technologies.

Vision

Building new businesses

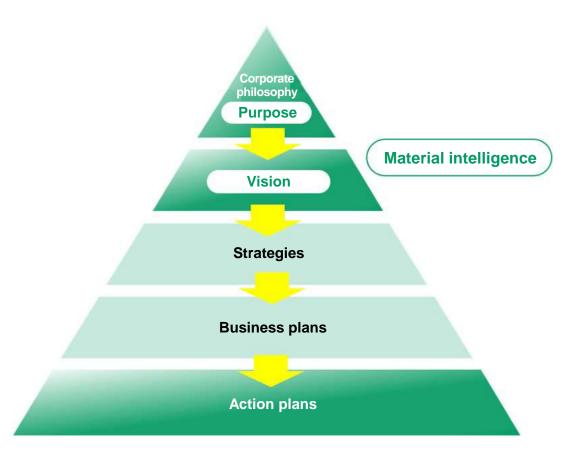
-and the future—

with our material intelligence

Sustainable growth in line with Purpose

- Integrated thinking-based management: Financial and social/environmental goals to reinforce one another
- Ambidexterity: Ramp up Exploitation and Exploration
- Unlock synergies: Obtain conglomerate premium

Adjust and renew portfolio



The new portfolio strategy uses two criteria: Is this product/market attractive? Is there a prospect for sustained synergy?

Adjust and renew portfolio

- 1. Invest in sectors with bright growth prospects (markets that are attractive and winnable)
- 2. Pursue sustained synergy (identify who the best owners of the assets are)

With an exploratory mindset, uncover the values required for attractive markets and then integrate diverse technologies to enable sustained value creation

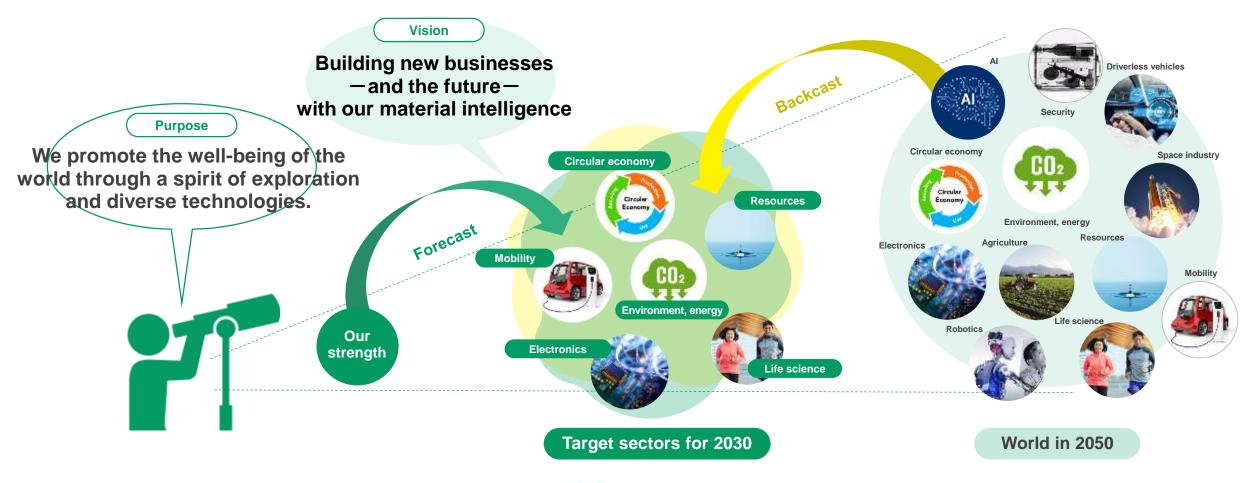
Idea behind plan: 1

We need to pinpoint attractive markets (choose our battlefields) for sustainable growth.

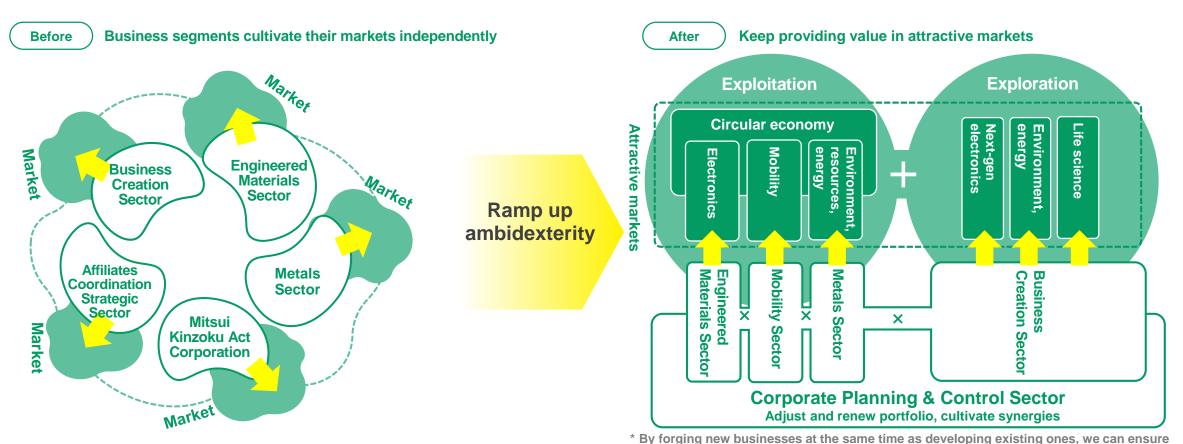
Idea behind plan: 2

We need an organizational footing to unlock sustained synergies.

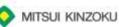
We defined the product/market scope for 2030 by backcasting attractive markets from 2050 and forecasting winnable markets from our distinctive strength.



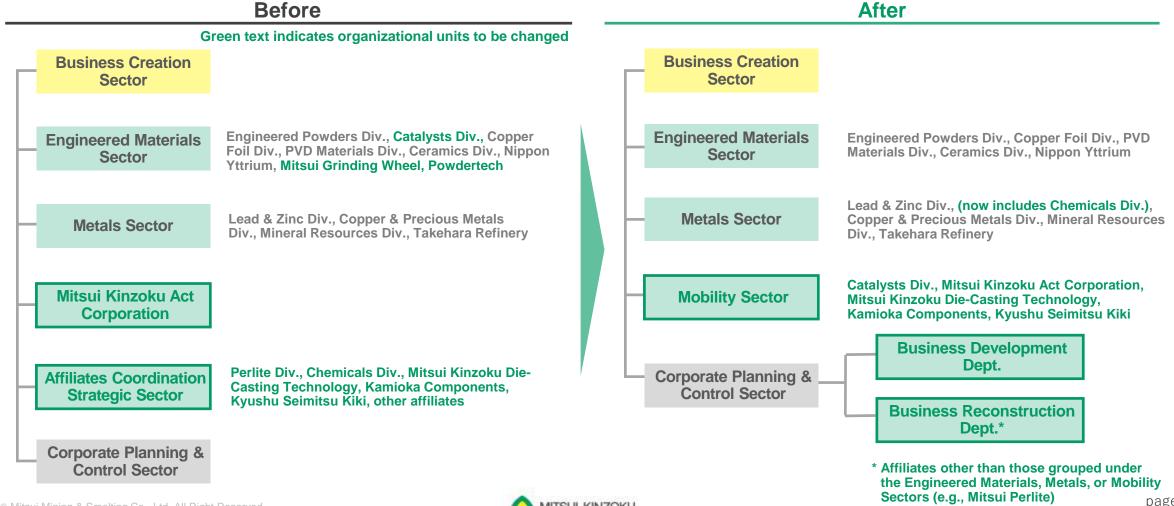
Until now, we have allowed business segments to cultivate their markets independently. We now want to be an organization that keeps providing value in attractive markets. We will ramp up our ambidexterity of exploitation and exploration.*



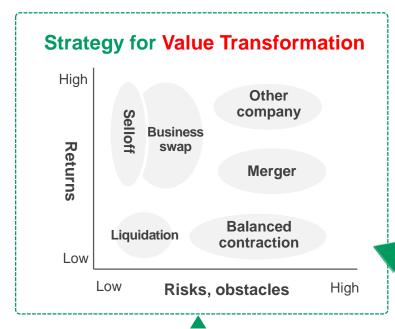
sustained innovation and resilience.

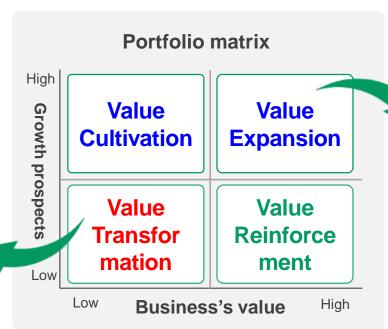


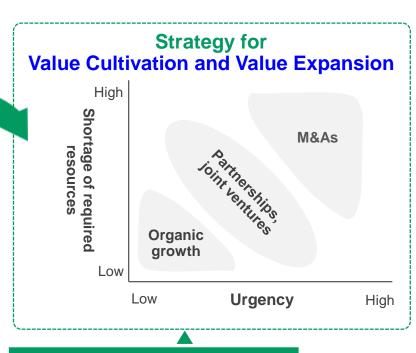
To achieve our Purpose and Vision, we will reorganize business segments as part of a whole-scale organizational change.



We will manage our portfolio dynamically, allocating capital to businesses with bright growth prospects.







Criteria for strategic decision-making

Risks in disinvesting or scaling down

- · Impact on other businesses
- Talent-related risks
- Capital loss

Returns in disinvesting or scaling down

- Cash generated
- Risk minimization
- Talent

Options to be considered

- Selloff, listing
- Spinoff
- Merger
- Business swap
- Liquidation
- Balanced contraction (to minimize loss)

Criteria for strategic decision-making

Shortage of required resources (examples)

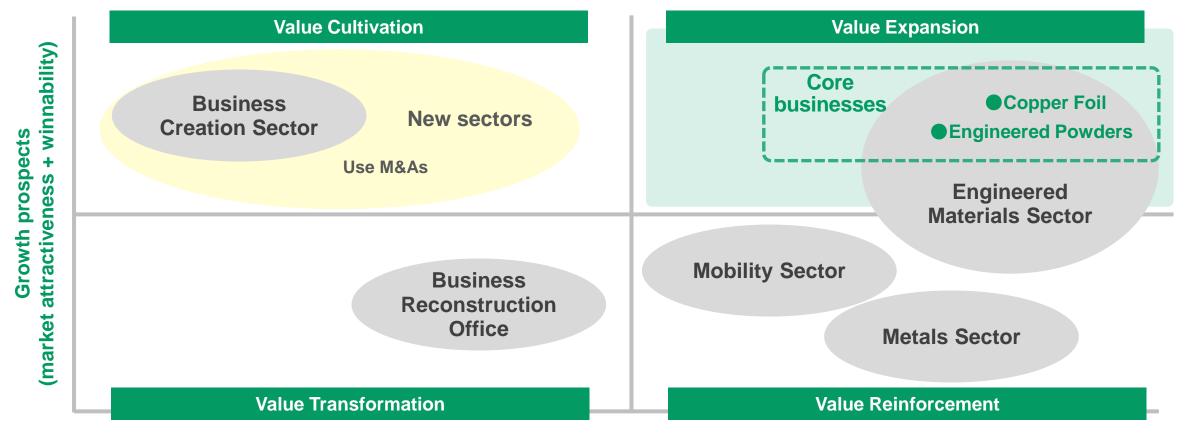
- Scale
- Tech
- Products
- Processes
- Selling power

Urgency (examples)

- Market growth rate
- · Pace of tech devt.
- Competition options



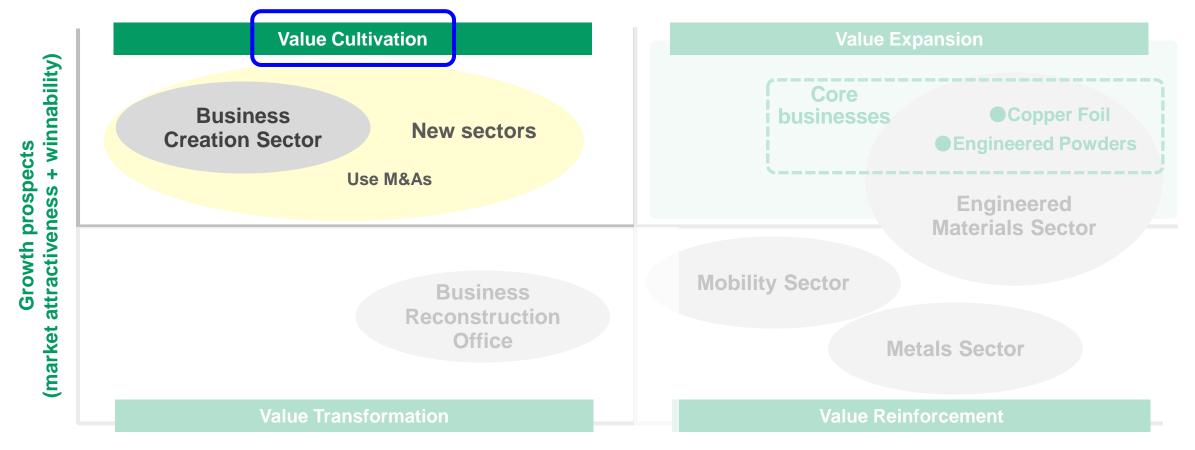
Decisions on which of our 29 business units to allocate capital will be guided by objective data on the prospective business's growth prospects and by our experiences during (and the outcomes of) the 2016–2018 and 2019–2022 periods.



Business's value



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Business's value

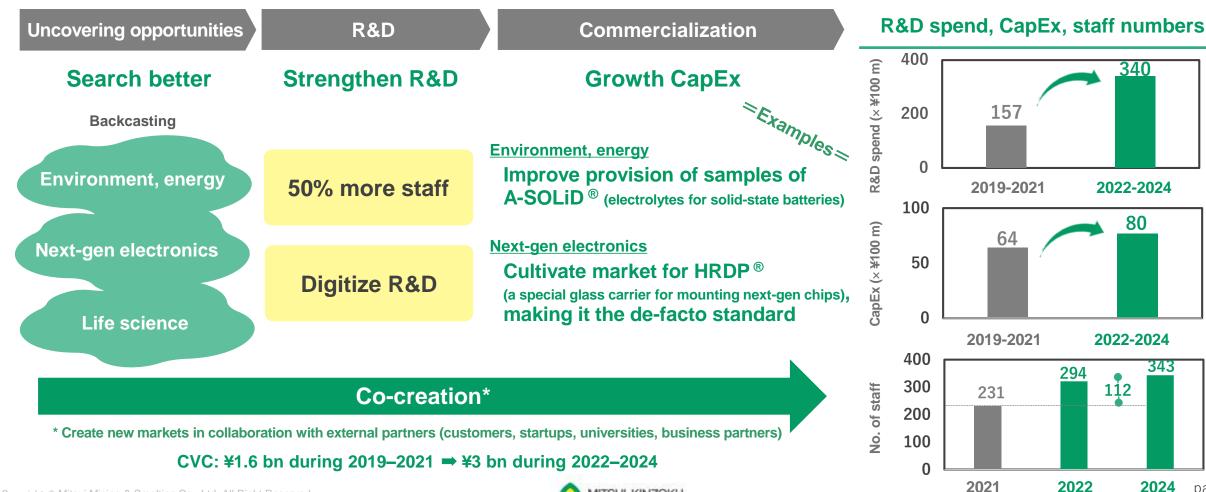
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80

2024

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To achieve sustainable entrepreneurship, we will search for opportunities better (using backcasting to identify social issues that present business opportunities), strengthen R&D, and invest growth CapEx more effectively.



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Leadable markets

Commercial stage

Strategy

SE*1 business unit

Vision for 2030

Lead market for solid-state battery parts

Electric vehicles (marketed as low-carbon solutions)

- **Auto applications**
- **Energy storage systems**





Special purpose

Auto

applications

Early stage: **Early-stage marketing**

R&D stage

Evaluate viability of full-scale introduction Improve prototyping to forge new market

Offer samples actively to develop winning business formula (bolster sources of competitiveness)

Procurement

Manufacturing

Product development

Global development

HRDP business unit

Vision for 2030

Make product the standard in nextgen chip mounting Semiconductors (marketed as solutions in digital society)

- 5G/6G





Transformative stage: Make product the standard

Battle to make product the de-facto standard in high-performance, low-cost mounting for next-gen chips

Improve capacity to provide strategic value, cooperate more effectively with Geomatec

Market cultivation

Production tech

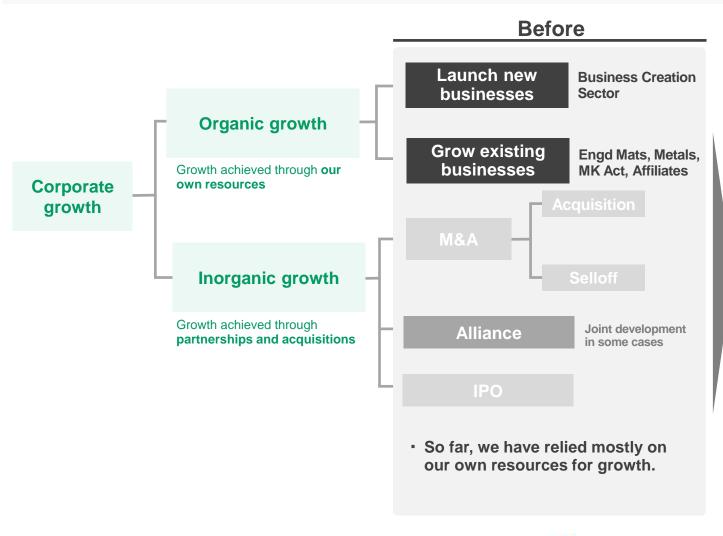
Improve DOE*2

Establish finepitch process

^{*1} SE: Solid electrolyte

^{*2} DOE: Design of Experiments (a process for examining the input variables that will deliver the desired output (value for the customer)

We will use M&As to develop existing businesses and forge new businesses.





On April 1, we opened the Business Development Dept. This department will manage the M&A budget.

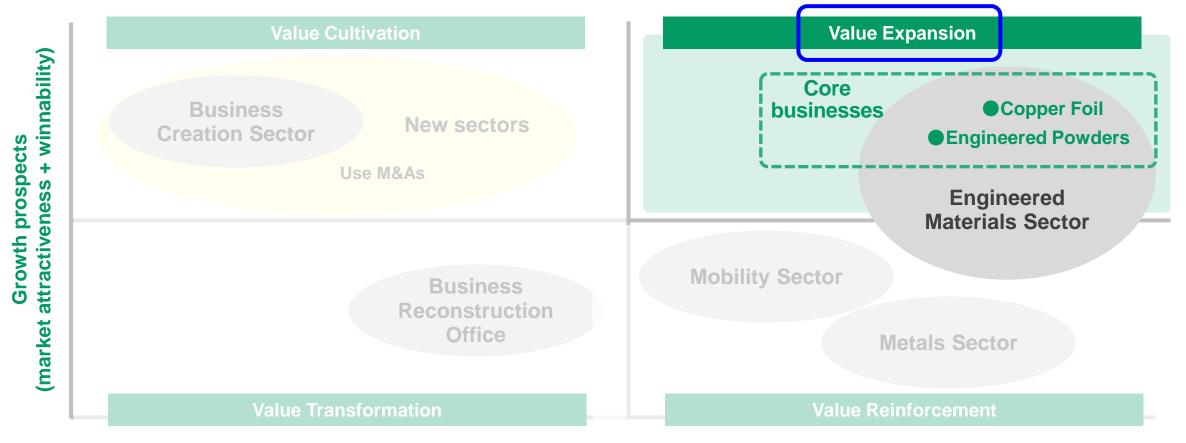
M&A strategy (Business Development Dept.)

- We will follow a programmatic M&A strategy.* Deals will be based on the theme of integrating our technologies.
- ♦ As part of dynamic portfolio management, we will find out who the best owners of the business assets are

	Before	After
1 M&A budget	M&As conducted off-budget as and when	¥20 bn Benchmark: 30% of market cap over 10 years
2 M&A expenses	Budgeted as and when	¥400 mn
3 Business Development Dept.	Staff: 3	Staff: 8

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Decisions on which of our 29 business units to allocate capital will be guided by objective data on the prospective business's growth prospects and by our experiences during (and the outcomes of) the 2016–2018 and 2019–2022 periods.



Business's value



Vision for 2030

FY2030 targets: ¥180 bn net sales, ¥40 bn real-terms ordinary income, >70% of products newly launched, green products accounting for >50% of sales

Key strategies Prepare to expand MicroThin™ market/applications Copper foil (1) Enter new markets (2) Fully leverage supply capacity Maximize profit from existing products (electronic **Engineered** powders, abrasives) powders Launch new products (powders for 3D printers, rare-earth metal solutions) **PVD** Keeping decent margins, overhaul production to reduce costs and cultivate future products materials Expand sales of new products (e.g., next-gen **Ceramics** cutters) **ESG** actions Work with Head Office to pave way for producing green products and reaching carbon neutrality by 2050



Performance of key products

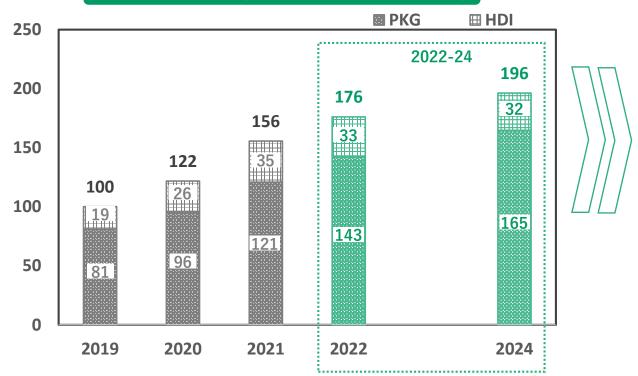
FY2021 scaled	at 100	2021	2022	2024
MH alloys	Indicator	100	130	120
Electronic copper powders	Indicator	100	131	174
Electronic copper foil	Volume	2,090	2,200	2,210
MicroThin™	Indicator	100	113	126
-for HDIs	Indicator	22	21	20
-for PKGs	Indicator	78	92	106
PVD materials	Indicator	100	83	89

Capitalizing on growing demand for MicroThin™ (MT) among PKG makers, new businesses should turn a profit from 2025.

Vision for 2030

Through functional foil, we provide new value to growing markets

MT sales volume (with FY2019 scaled at 100)



2022–2024 strategies

Catch up in MT market

Shift for-PKG MT production to Malaysia

Boost capacity of Japanese plants

Create new copper foil businesses

Expand range of MT's PKG applications

Forge new businesses outside circuitry

Enhance marketing in Greater China

Establish bases in South China and Taiwan

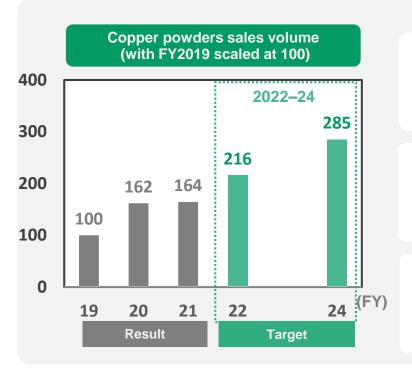
Shorten product development cycle

Install apparatus for development and prototyping

We will improve sustainable value (integrating economic, environmental, and social dimensions). We will keep creating new products/businesses and maximize profits of existing ones.

Vision for 2030

Well-acquainted with the needs of the market and broader societal expectations, we keep providing value-added powders in a way that builds the business's value.



Continual succession of new products/businesses

2030: New products/businesses account for 25% of profits

Profits of existing businesses maximized

Better sustainable value: Environmental
Products designed with view toward circular
economy

2022–2024 strategies

Promote as material for electronics components

e.g. copper powder for MLCCs, copper powder for low-temp sintering

Promote as abrasive material

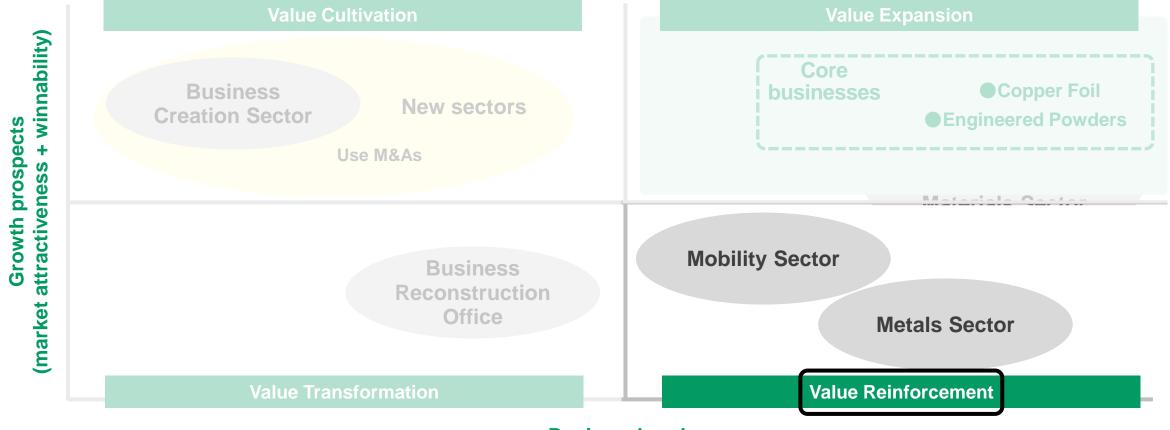
LCDs, new markets

Invest in development of next-gen products

e.g. copper powder for 3D printing, material for rare-earth metal solutions



Decisions on which of our 29 business units to allocate capital will be guided by objective data on the prospective business's growth prospects and by our experiences during (and the outcomes of) the 2016–2018 and 2019–2022 periods.





Vision for 2030

We are indispensable in efforts to build a sustainable world. We have a recycling network underpinned by our distinctive characteristics, and we use it to provide new metals and minerals for renewable energy.

Key strategies Build a sophisticated recycling network based on **Head Office** our smelting assets and use the network to develop new metals and minerals for renewable energy. Lead & zinc

- Leverage existing assets to expand waste processing business
- Improve margins for metals produced from complex raw materials
- Increase inventory and smelting of new lead/zinc raw materials to make profit

Copper & precious metals

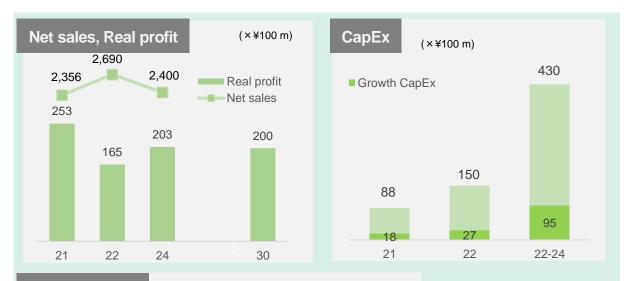
Mineral

resources

- Improve margins from profitable raw materials
- Reduce costs by improving operations and investing more judiciously
- Explore new mining opportunities in Huanzala and Pallca

ESG actions

To contribute to a low-carbon world, reduce waste output and explore renewable energy solutions



Assumptions

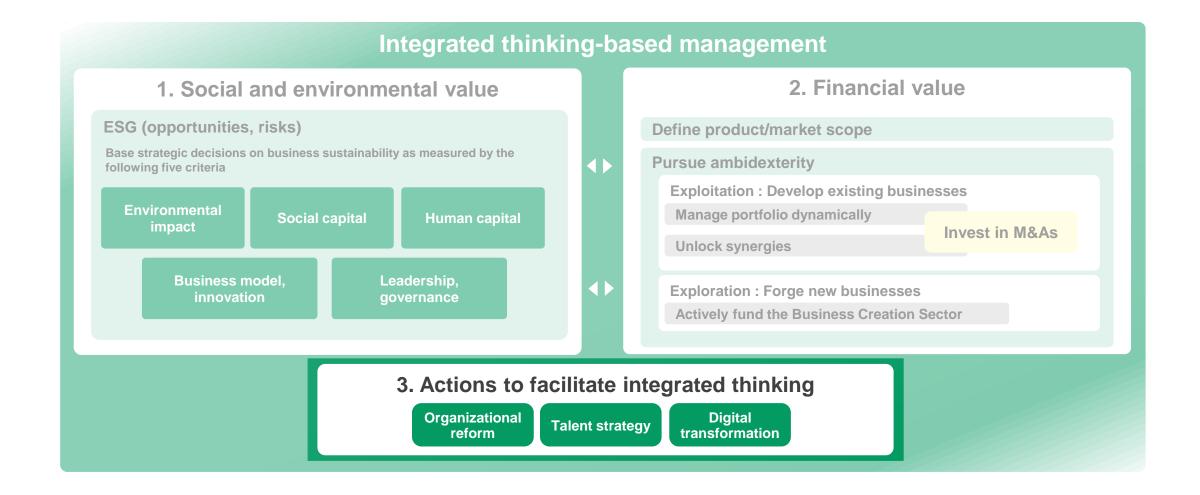
		2021	2022	2024
Zinc	(\$ / t)	3,254	3,700	3,000
Lead	(\$ / t)	2,283	2,300	2,100
Copper	(¢ / lb)	440	426	381
Forex	(¥/\$)	112.0	120.0	120.0

Vision for 2030

We act as a pioneer of mobility, always choosing the best values and always creating. New products account for >50% of sales, ordinary income trends at ¥20 billion, and there are no product recalls.

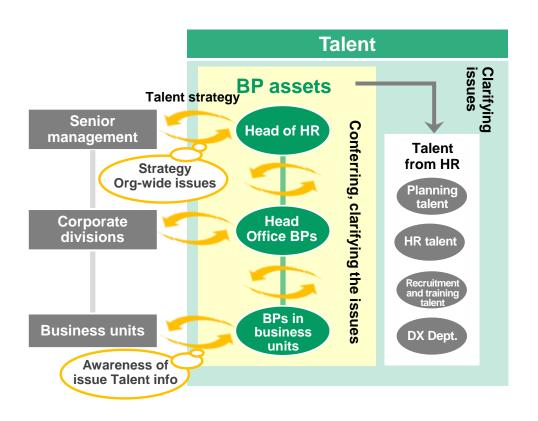






To improve talent management strategies, we will roll out an approach that reimagines talent as a set of business-partner assets*.

System of business partners (BPs)



Improve capacity to formulate talent management/allocation strategies, resolve issues quicker

Launch integrated system for recruiting, training, deploying, and evaluating talent

Monitor and manage talent info in an integrated way (DX Dept.)

Ascertain talent-related risk info

Improve inter-departmental coordination with regular dialogues

^{*} Here, "business-partner assets" means the individuals and organizational units who help the business grow and resolve the targeted issues.

To enhance competitiveness, we will launch a threefold digital transformation (in R&D, manufacturing, and back-office processes) that will bolster our digital infrastructure and help us evolve into a digital community.

R&D

Shorten development times Optimize scale-up process

Manufacturing

Improve operations management, level-up QCD Create smart factories

Back office (streamlining)

Use SAP S/4HANA to achieve global standard
Streamline back-office operations

Digital integration

Infrastructure, security, governance

Build infrastructure that is safe, efficient, and up to date

Talent management

Develop digital talent

Improve competitiveness

Develop existing businesses

Forge new businesses

Accelerate strategic decision-making

Shift to value-added operations

Digital infrastructure



business

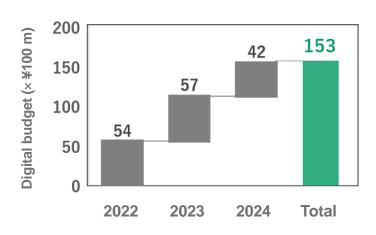
segment-specific strategies

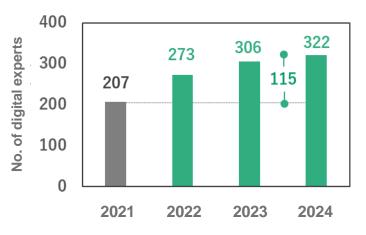
During 2022–2024, we will spend 15.3 billion on digital integration and appoint 115 more digital experts.

Digital transformation strategies for 2022–2024

Vision for 2030 Strategies for 2022–2024 **Expected outcomes** Finalize model for reducing Industry's R&D cycle time to 1/3 Able to deliver new products R&D shortest R&D to market quicker Build data infrastructure and cvcle time operational infrastructure Digital integration · Digitize model refineries to World-class Manufacturing Stable operation manufacturing stabilize their operations Infrastructure in place for strategic info Visualize themes for Resources used streamlining back-office Each operation digitized and efficiently and Back office operations strengthened effectively Roll out SAP S/4HANA · Employee growth supported, value-added operations Build network for cloud Digital infrastructure Digital tech used Infrastructure, computing confidently and Cybersecurity risks minimized security. Strengthen global security governance safely Expand system controls Greater momentum toward Digital talent team Talent Provide digital content automation across Cybersecurity risks minimized training management organization Internal digital talent pool

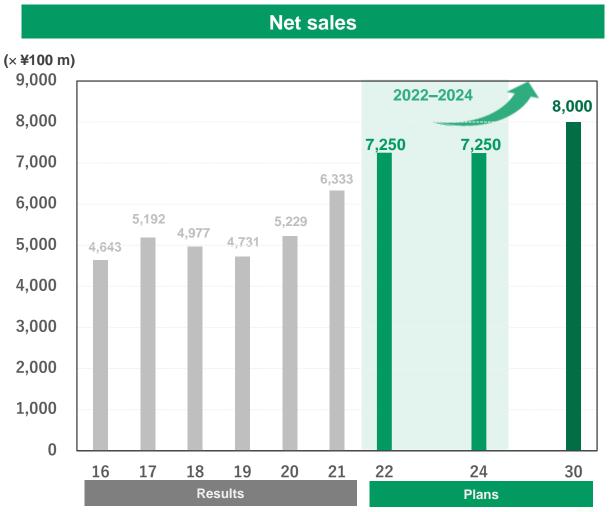
2022–2024 digital budget, digital experts

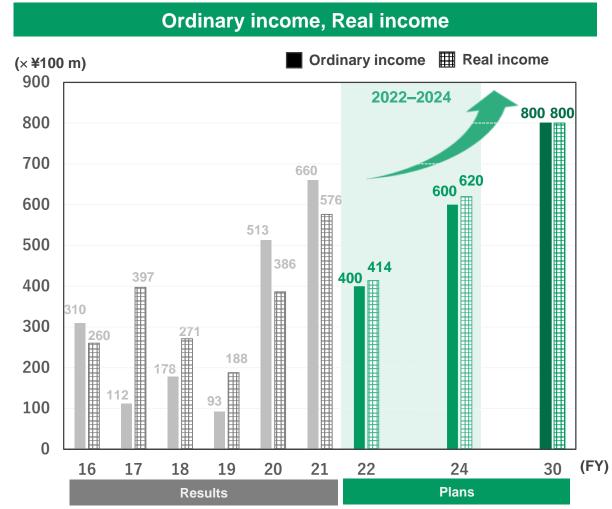




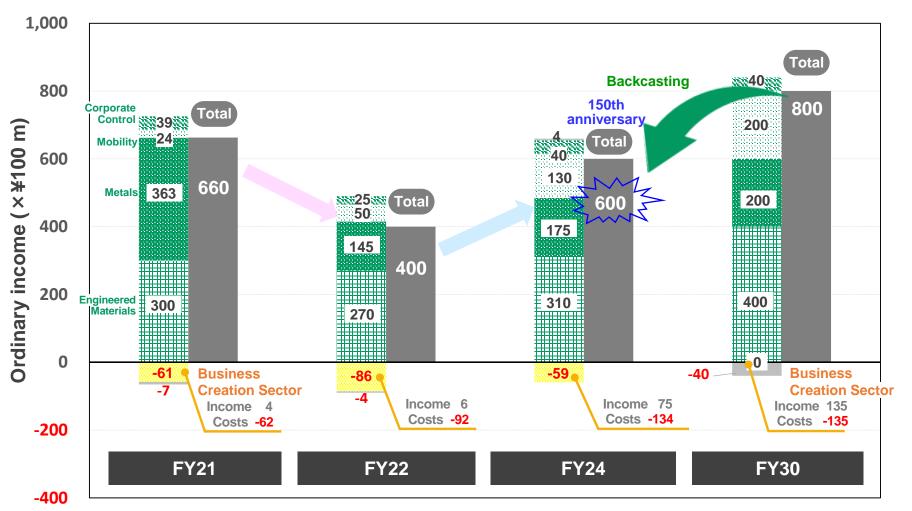


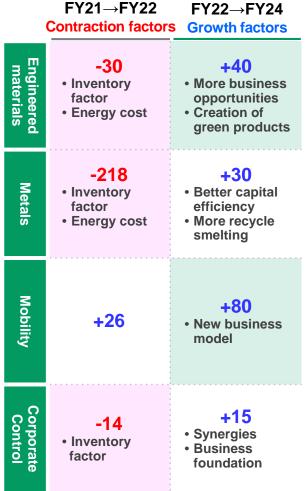
Our FY2030 target for ordinary income is ¥80 billion. Backcasted to FY2024, the target is ¥60 billion.



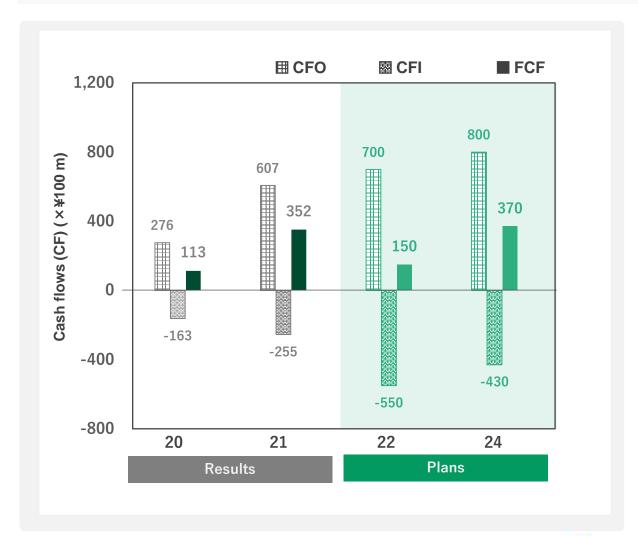


Our FY2030 target for ordinary income is ¥80 billion. Backcasted to FY2024 (our 150th anniversary), the target is ¥60 billion.





We will improve in other indicators during 2022–2024.





40% of CapEx will be growth CapEx (for expanding and growing our value).

Cash allocation plan for 2022–2024

(×¥100 m)

Cash in

Cash flows from operations 2,300

Total: 2,300

Cash out

Shareholder returns 230 Growth CapEx (for Value Cultivation and Value Expansion) 550

Other CapEx 850

Debt service 580

Other 90

Total: 2,300

CapEx (includes M&A) 1,400

Total: 1,400

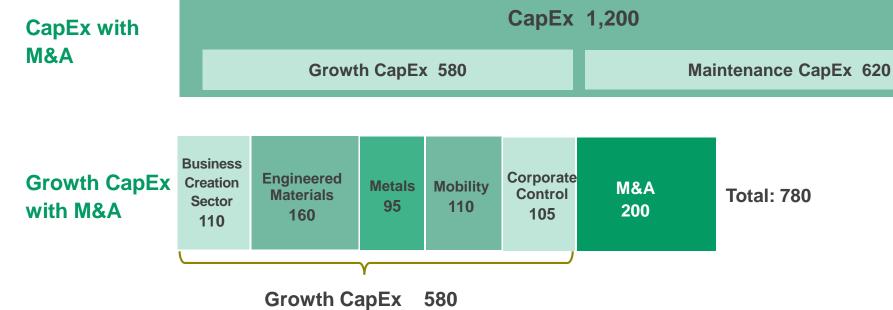
M&A

200

The growth CapEx budget is ¥78 billion budget when M&A spending is included.

2022-2024 CapEx with M&A

(×¥100 m)



For the 2022–2024 period, we have adopted a new policy on shareholder returns: We use dividend-on-equity ratio (DOE) and we have upgraded the benchmark from a 2.5% DOE to 3.0% DOE.

2022-2024 policy

Provide continuous and stable shareholder returns, with a benchmark of 3.0% DOE.

Dividend per share forecast

	2021	2022
Dividend per share	¥110	¥140

Our policy on shareholder returns will be updated to reflect improvements in our financial position.

